

COMP4102 Assignment 2

Erik Iuhas 101076512

Question 2.

If you wanted to blend both images while removing the artifacts shown in the merged image, you would need to overlay the images over a gradient that fades in the region where both images overlap. Doing this preserves the base image's pixel values, and the image's pixel values are added, creating a smooth transition between the two. To do this in Python, you would need to make an array based on the size of both images and create a gradient ranging from 0 to 1 based on the point where they overlap. You multiply both images by their respective gradient and add both images. Both gradients should add up to 1 when overlaying to ensure no loss of value occurs. I started an example in Clip Studio Paint to illustrate the technique. In this case, the blend I made is less gradual, but by changing the length of the gradient and blending region, you can get a smoother transition between both photos.

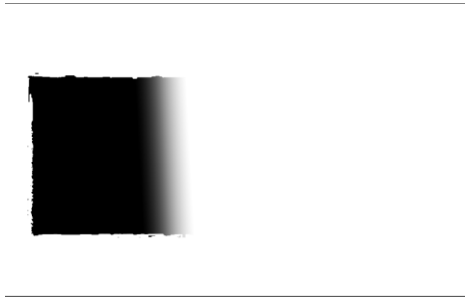


Figure 2. Gradient from Base Image



Figure 1. Both gradients combined

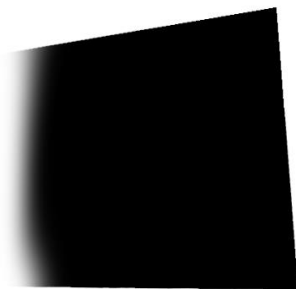


Figure 3. Gradient from Warped Image



Figure 4. Base Image clipped onto gradient



Figure 5. Warped image clipped onto the gradient



Figure 6. Both images combined, illustrating the smooth blending

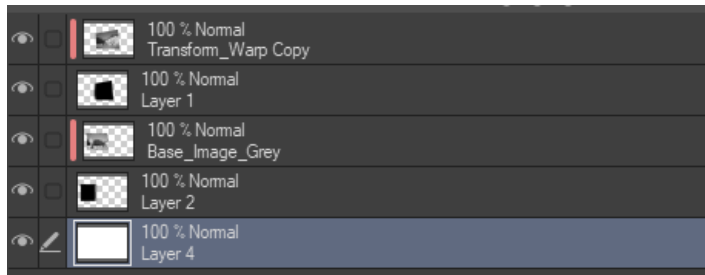


Figure 7. Layers in Clip Studio Paint, illustrating the layer setup.